

This year, 1901, I find it is still spreading to the south and east as a few plants were found for the first time along a roadside in the valley, perhaps a quarter of a mile away from the last-mentioned locality. It has also gained a foothold in some fields on the other side of a patch of woods still further south. The most easterly station I have found for it is the southern slope of the ridge west of Grassy Sprain Lake while the most southerly is about half a mile north of Lincoln Park on the main line of the New York Central and Putnam road. If it continues its triumphant march to the south, it will soon cross the New York City line and approach its old possessions, as there was once a station for it, I believe, on Manhattan Island.

In the two cases especially noted above it has taken *Solidago speciosa* but three years to take complete possession of new territory and the goldenrods and asters that formerly flourished there have almost disappeared. It is not only that many new plants seem to spring up but the older ones increase in size very rapidly, one transplanted to my garden more than doubling its size the second year. Many of the old plants sent up seven or eight flower-stalks this year five feet or more in height.

YONKERS, N. Y., November 15, 1901.

## HESPERASTER, A GENUS OF LOASACEAE

BY T. D. A. COCKERELL

✓ **Hesperaster** (Western Star); *Bartonia* Sims, Bot. Mag. 36: pl. 1487. 1812. (Not *Bartonia* Muhl., a valid genus of *Gentianaceae* published in 1801.) Biennials or perennials; petals 10 or fewer, narrow and pointed, conspicuous; stamens very numerous, up to 300; leaves pinnatifid with pointed lobes; trichomes barbed; seeds numerous, mostly winged. Type **Hesperaster decapetalus** (*Bartonia decapetala* Sims, l. c.). The genus includes, among others, the following species:

1. **HESPERASTER DECAPETALUS** (Sims). In New Mexico I have found this only at Raton. The flowers open at sunset, and are visited by the larger *Sphingidae*. Just as they open they are visited also by *Bombus*, which can get into them when they are

opening, the petals affording some purchase; but after they are fully open the radiating stamens form an efficient barrier.

✓ 2. *Hesperaster nudus* (*Bartonia nuda* Pursh, Fl. Am. Sept. 328. 1814). Vespertine.

✓ 3. *Hesperaster laevicaulis* (*Bartonia laevicaulis* Dougl.; Hook. Fl. Bor.-Am. 1: 221. 1833). Diurnal.

✓ 4. *Hesperaster Rusbyi* (*Mentzelia Rusbyi* Wooton, Bull. Torr. Club, 25: 261. 1898). Vespertine. Its distribution in New Mexico is peculiar; I have found it in the Sacramento Mountains and around Las Vegas, where there is no *H. multiflorus*. The latter occurs at Santa Fé, Raton and in the Mesilla Valley, to the exclusion of *H. Rusbyi*.

✓ 5. *Hesperaster multiflorus* (*Bartonia multiflora* Nutt. Journ. Acad. Phila. II. 1: 180. 1848). Diurnal. The flowers are erroneously stated by Coulter to be deep yellow. They are in reality little darker than those of *H. decapetalus*. They are freely visited by bees, especially *Perdita*.

✓ 6. *Hesperaster perennis* (*Mentzelia perennis* Wooton, Bull. Torr. Club, 25: 260. 1898). Diurnal (?)

✓ 7. *Hesperaster pumilus* (*Mentzelia pumila* T. & G. Fl. N. Am. 1: 535). Vespertine, according to Miss Eastwood, Proc. Cal. Ac. Sci. II. 6: 291.

✓ 8. *Hesperaster chrysanthus* (*Mentzelia chrysantha* Engelm.; Brandegee, Fl. S. W. Col. 237). Diurnal (?)

✓ 9. *Hesperaster densus* (*Mentzelia densa* Greene, Pittonia, 3: 99. 1896).

— *H. perennis* (Wooton), and *H. densus* (Greene) are perennials; the others apparently all biennials. The latter is a Colorado species and has probably been confused with *H. multiflorus*. I have been greatly indebted to Dr. Rydberg for advice when preparing these notes.

EAST LAS VEGAS, NEW MEXICO.

## SHORTER NOTES

EXPLOSIVE FRUITS.—During the present year a portion of our experiment grounds has been in Polemoniaceae, including spe-